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ABSTRACT

This manual for the teacher and/or counselor is part of the microcomputer version of the Carerer Planning System (CPS). CPS is a comprehensive instructional package designed to provide individualized career exploration and career-planning experiences for students of approximately middle-school age. This microcomputer version is designed to take advantage of the motivational, managerial, and interactive capabilities of the Atari 800 microcomputer to provide individualized career exploration and career-planning experiences for students with mild learning handicaps. Students with mild mental retardation, learning disabilities, and behavior handicaps reading at the 3.5 grade level will profit from working with this instructional package. Section 1 provides a basic theoretical awareness of the goals, purposes, conceptual bases, and developmental history of the CPS. It describes the content, organization, and sequence of student activities. Section 2 describes the steps to get ready to use the CPS microcomputer hardware and software with the students, procedures for making and using back-up disks of students' records, and built-in options. The instructional procedures for using the CPS are then discussed. Steps for developing an education plan and the teacher's role are considered. Section 3 contains ideas for supplementary group activities, discussions, games, and other activities expanding upon the individualized core activities. A listing of information sources is appended. (YLB)

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Career Planning System Microcomputer Version

Instructor Guide

CE040 336

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Career Planning System Microcomputer Version

Instructor Guide

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1983

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Introducing the CPS

What the CPS Is

The Career Planning System (CPS) is a comprehensive instructional package designed to provide individualized career exploration and career-planning experiences for students of approximately middle-school age. This microcomputer version of the CPS was developed specifically to take advantage of the motivational, managerial, and interactive capabilities of the Atari 800 microcomputer to provide these experiences for students with mild learning handicaps. Students with mild mental retardation, learning disabilities, and behavior handicaps who are capable of reading at the 3.5 grade level will be able to profit from working with this instructional package.

Through the CPS, students become acquainted with occupations that are representative of basic worker functions. The key to the System is the students' own interests--not in occupations themselves but in activities the students presently enjoy, either in school or during leisure time. The final outcome is students' insightful participation in planning their studies and activities for the future.

This goal must, of course, be an outgrowth of development in other areas--in self-understanding; in problem-solving, decision-making, and planning skills; and in increasing knowledge of occupations, their interrelationships, and their relationship to the individual. Therefore, CPS materials are designed to help students achieve the following four major career development outcomes:

- To learn about personal interests
- To examine occupations to determine how they may relate to personal interests
- To identify activities and areas of study in which personal interests may be nurtured and in which related skills may be developed
- To relate educational preparation to potential occupational choices

Thus, as self-understanding increases, students can speculate about areas of work that may be of interest and can learn about needed skills and education and about working conditions found in occupations within those areas. Then, by identifying available studies and activities that are related to occupational interests, students can begin to attach career meaning to educational opportunities.

It is important to note that, as part of their experience with the CPS, students are encouraged to be aware of changing interests, the changing job market, and changing needs of society. Thus, students study not an entire spectrum of occupations from which they are expected to choose one, but a limited number of occupations that are representative of basic worker interests--those interests that make us gravitate toward various kinds of activity and that make it possible for us to enjoy a number of related kinds of activity. Thus, while gaining occupational information, students are, more importantly, coming to understand their own interests as these relate to work, so that this knowledge can broaden rather than narrow their career horizons.

The CPS was originally developed by the National Center's Alliance for Career and Vocational Education, a consortium of school districts across the United States that pooled their resources over several years to develop career education materials for students from elementary through secondary school. After the original version had been tested in several of these districts and revised on the basis of that testing, a resource room version of the original was also developed, tested, and found effective with mildly handicapped students of approximately middle-school age. This microcomputer version was developed from the resource room version under a grant from the U.S. Department of Education.

During the fall term of the 1982-1983 academic year, this version was field-tested on five school districts within, or adjacent to, major population centers across the country: Boulder (Denver), Colorado; Brentwood (St. Louis), Missouri; Carrollton (Dallas), Texas; Columbus, Ohio; and Freeport (New York City), New York. Revised on the basis of the data collected during the field test, this unique and valuable product is currently available for national dissemination.

Why Handicapped Students Should Use the CPS

Over the past decade, legislation, litigation, and a growing public awareness have combined to promote the full participation of handicapped people in the mainstream of American life. Part of this participation is, of course, vocational: as artificial barriers to various occupations have fallen, employment opportunities for the handicapped have at last begun to grow. No longer relegated primarily to stereotypical, low-level jobs--or, worse, to none at all--handicapped individuals can now take the responsibility for choosing and planning challenging and satisfying careers of their own.

Choosing and planning a career is a complex process--one that ideally begins in the elementary grades and often continues into retirement. All of us, handicapped and nonhandicapped alike, need assistance in completing the process to increase its chances of leading us to occupational choices that contribute significantly to our personal satisfaction.

For handicapped people, this need seems particularly acute. Until recently, career planning was not widely recognized as an important component of the education of handicapped children. Expanded occupational opportunities, however, have brought about this recognition; and educators of handicapped students have become increasingly aware of their obligation to enable their students to take full advantage of their new career opportunities.

Since career planning has not traditionally been a part of the experience of handicapped students, the relevant background and resources upon which they and their teachers and counselors might draw are severely limited. The Career Planning System (CPS) is one of comparatively few resources designed to make explicit for mildly handicapped students the concepts and processes of career planning. Centered on students' interests rather than on more traditional occupational clustering systems, the CPS allows students to begin their career exploration where they already have an interest rather than slotting them into preestablished categories that may have little or no relevance to their previous experience of their present knowledge and needs.

Dependent upon simulations of actual job tasks, the CPS introduces students to a variety of occupations through concrete experiences rather than through abstract, theoretical formulations. Providing realistic exposure to jobs from entry to advanced levels, the CPS introduces students to the range of worker roles they might adopt and with which they might interact while neither excluding options a priori nor encouraging unrealistic expectations

of career possibilities. Individualized, yet dependent on teachers facilitation and frequent student-teacher interaction, the CPS blends the development of independence and control over one's own environment with the provision of guidance and assistance throughout the process.

What Advantages the Microcomputer Offers

Computer-based education--like career planning--is important for all students, but especially so for handicapped ones. Far more than simply an alternative means of delivering standard information, the microcomputer offers several powerful techniques of instruction that are particularly effective in meeting the needs of learning-handicapped students. Drill-and-practice, widely heralded as the preeminent application of the computer for handicapped learners, is in fact only one of the possibilities. The Career Planning System focuses on several others--for example, on individualization of instruction and the provision of opportunities for students to act effectively on their environment.

The CPS individualizes instruction in several ways. Most obviously, it personalizes students' experiences by addressing each student by name frequently throughout the package. Most significantly, however, it requires students to progress through the experience on the basis of their individual interests and reactions. Initially, students are routed to groups of occupations according to the results of an Interest Sort completed by each student. Then, each time students complete a component of the CPS, they evaluate the experience and decide on their next steps according to that evaluation. After exploring in this way as many occupations as the students choose to investigate, they work with a teacher or counselor to create educational plans that reflect the personal characteristics each student will have discovered as a result of the exploratory experience.

Learner control over the environment is achieved most directly through making students responsible for their movement through the CPS as described above. In addition, several other mechanisms were built into the package to enhance students' senses of independence and self-esteem. For example, in terms of students control of the pace of instruction throughout the CPS, text appears on the displays in response to student commands. Similarly, displays advance only when students indicate they are ready to move ahead. Finally, throughout the students' experiences with the CPS, they are made aware of the general structure within which they are operating and of how much control they exert within that structure. By thus helping students to see themselves as effective agents within their immediate environment, the CPS is designed to encourage students to view themselves as self-directed, independent people capable of affecting their larger environment as well.

The microcomputer version of CPS was designed specifically to meet the needs for individualization and for opportunities for independence characteristic of students in the target population.

In addition, other considerations known to affect the learning of these students in such areas as concept development, reading level and language style, the provision of feedback and reinforcement, transfer of learning and generalization of knowledge, appropriate presentation of information, and so on were incorporated into the development process to ensure the creation of a modern, innovative product that is truly suited to the needs of the special class.

Materials

Each CPS package contains the following three types of materials:

- Instructor Guide (one copy)

  A manual that will be useful to the teacher and/or counselor throughout the CPS, the Instructor Guide serves several purposes:

  - To provide a basic theoretical awareness of the goals, purposes, conceptual bases, and developmental history of the CPS
  - To describe the content, organization, and sequence of student activities of the CPS
  - To detail the procedures for using the student-management component of the CPS and for guiding students through the various instructional components of the System
  - To suggest group activities for supplementing and expanding upon the individualized core activities of the CPS

- Student Guide (one copy for each student)

  The only hard copy the student will retain throughout the CPS, the Student Guide serves several purposes:

  - To introduce the student to the CPS
  - To provide worksheets for practice in working with the concepts and vocabulary essential to the CPS
  - To provide a central record of the student's CPS experiences, reactions, and developing interests
  - To provide an opportunity for the student to expand upon reactions entered in summary form on the computer
  - To provide the basis for discussions with the teacher and/or counselor to prepare a personal education plan

- Program Disks (thirty disks in one loose-leaf binder)

  The core of the CPS, the program disks, contains the major management and instructional components of the system:

  - Management component: (three disks). This comprehensive system allows the teacher to create a class roster, keep track of student data and progress throughout the CPS, and alter some aspects of the CPS as necessary to serve student and class needs. The management system is described fully in the "Technical Procedures" section of this Guide.

  - Instructional components: Introduction, Interest Sort, Probes, Activities, Briefs, Education Plan (twenty-seven disks). These closely integrated components of the CPS are the main vehicle for student progress through the System. Each is described fully in the "Instructional Procedures" section of this Guide.

Organization

The organizational structure of the instructional components of the CPS is displayed in figure 1. As the chart suggests, the students first encounter an introduction that includes basic vocabulary-building exercises and information about how to use the CPS. Next, the students complete an Interest Sort, the results of which are stored on a class record disk. The computer then directs the students to various occupational Interest Areas based on the Interest Sort results. After the students have explored as many of the Interest Areas as are indicated by those results, the teacher or counselor works with the students to prepare plans for their further education.

Figure 2 indicates the four representative occupations included within each of the ten CPS Interest Areas. Student exploration of as many of these forty occupations as are of interest constitutes the bulk of the activities of the CPS.

Figure 3 indicates the manner in which this exploration will take place within each Interest Area. As this figure shows, the students first read a Probe that provides general information about the Interest Area and workers within it. Next, the students make decisions to explore any of four occupations included in the Interest Area. Once an occupational Activity has been completed, the students may elect to get additional information about the occupation in the form of an occupational Brief. The students' reactions to the Activity and the Brief are recorded on the class record disk to be used later in formulating their Education Plans. When the students have completed all activities of interest in an Interest Area, they exit that Interest Area and visit with the teacher briefly to review progress. The students then proceed to the next Interest Area indicated by the results of their Interest Sorts. If a student (or teacher) decides to return to an Interest Area previously completed, the teacher may reset the student's start flag on the class disk.

Resetting the start flag to bring about an Interest Area change for a student is only one of the possibilities available to the teacher through the CPS management system. Figure 4 displays all the functions provided through this system. The teacher conducts the management of the CPS by selecting whichever option listed is most appropriate for a particular situation.

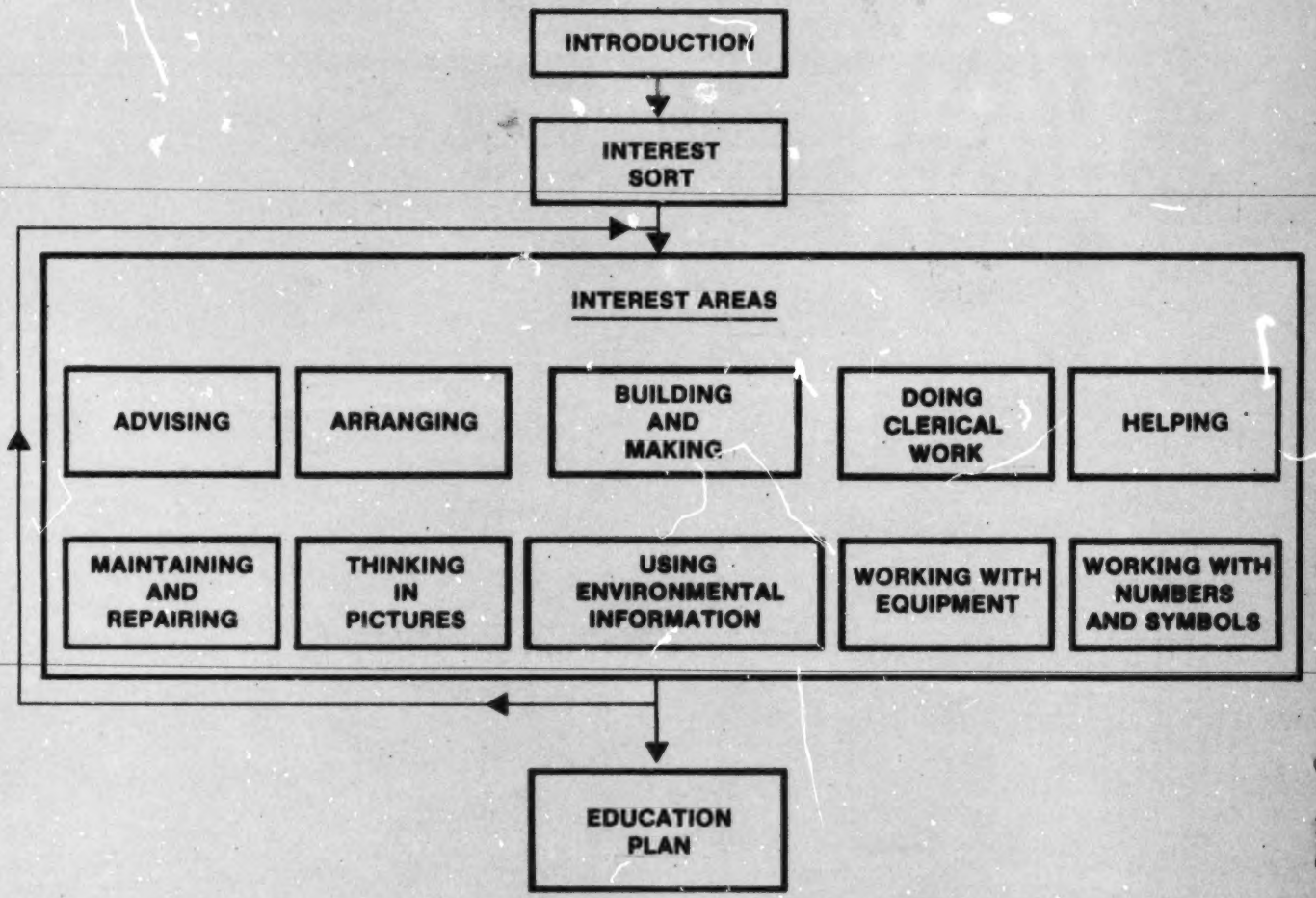

Figure 1. Career Planning System Overview

1. Advising

- Child care attendant
- Employment counselor
- Lawyer
- Travel agent

2. Arranging

- Architect
- Florist
- Hair stylist
- Interior designer

3. Building and Making

- Carpenter
- Drafter
- Painter
- Roofer

4. Doing Clerical Work

- Cashier
- File clerk
- Secretary
- Stock clerk

5. Helping

- Licensed practical nurse
- Police officer
- Properties manager
- Waiter

6. Maintaining and Repairing

- Appliance repairer
- Mechanic
- Plumber
- Sanitation worker

7. Thinking in Pictures

- Cartoonist
- Commercial artist
- Display artist
- Photographer

8. Using Environmental Information

- Farmer
- Fish and game warden
- Landscape gardener
- Meteorologist

9. Working with Equipment

- Computer service technician
- Cook
- Machinist
- Telephone operator

10. Working with Numbers and Symbols

- Library assistant
- Market research coder
- Medical laboratory assistant
- Teller

Figure 2. CPS Interest Areas and Occupations

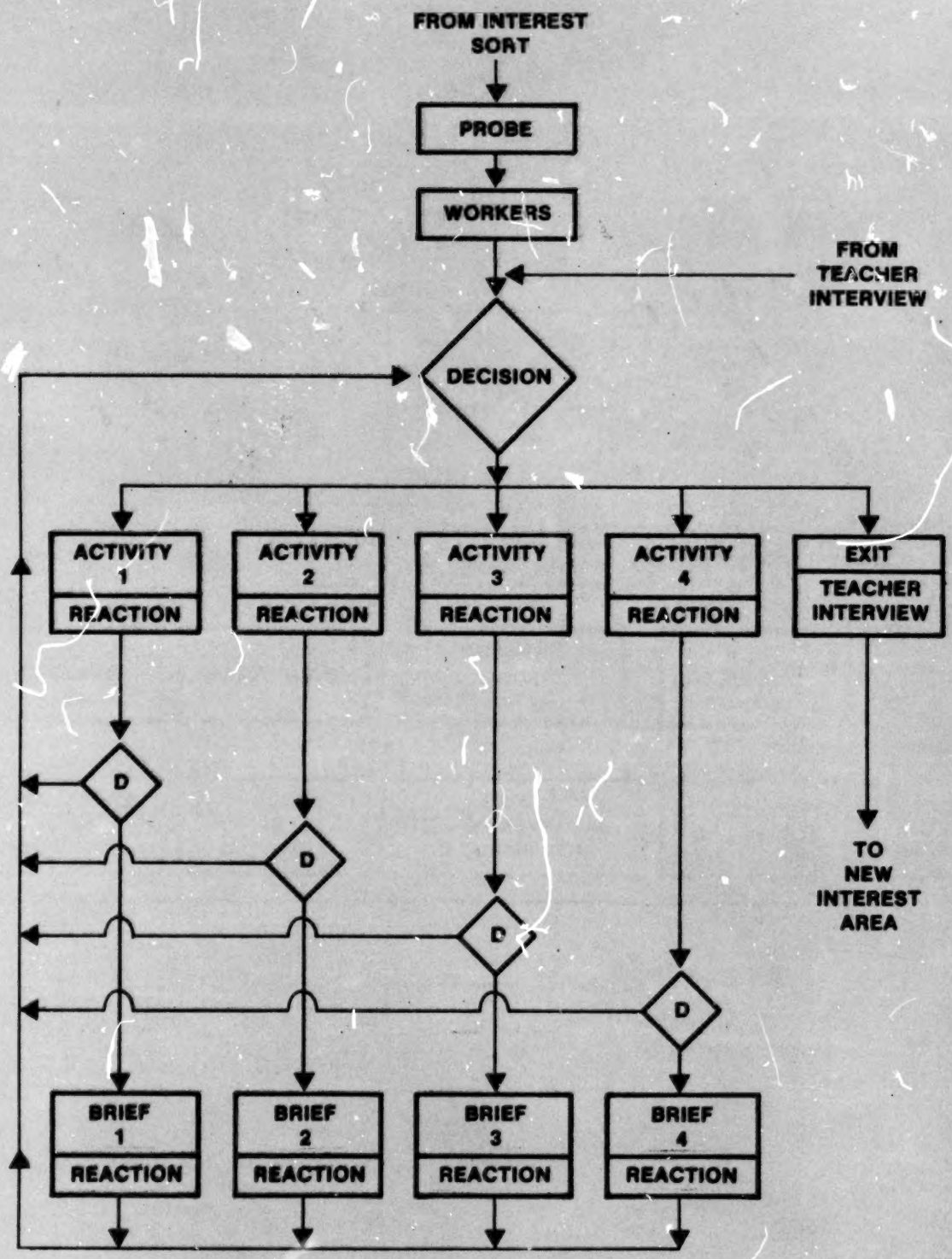

Figure 3. Interest Area Flowchart

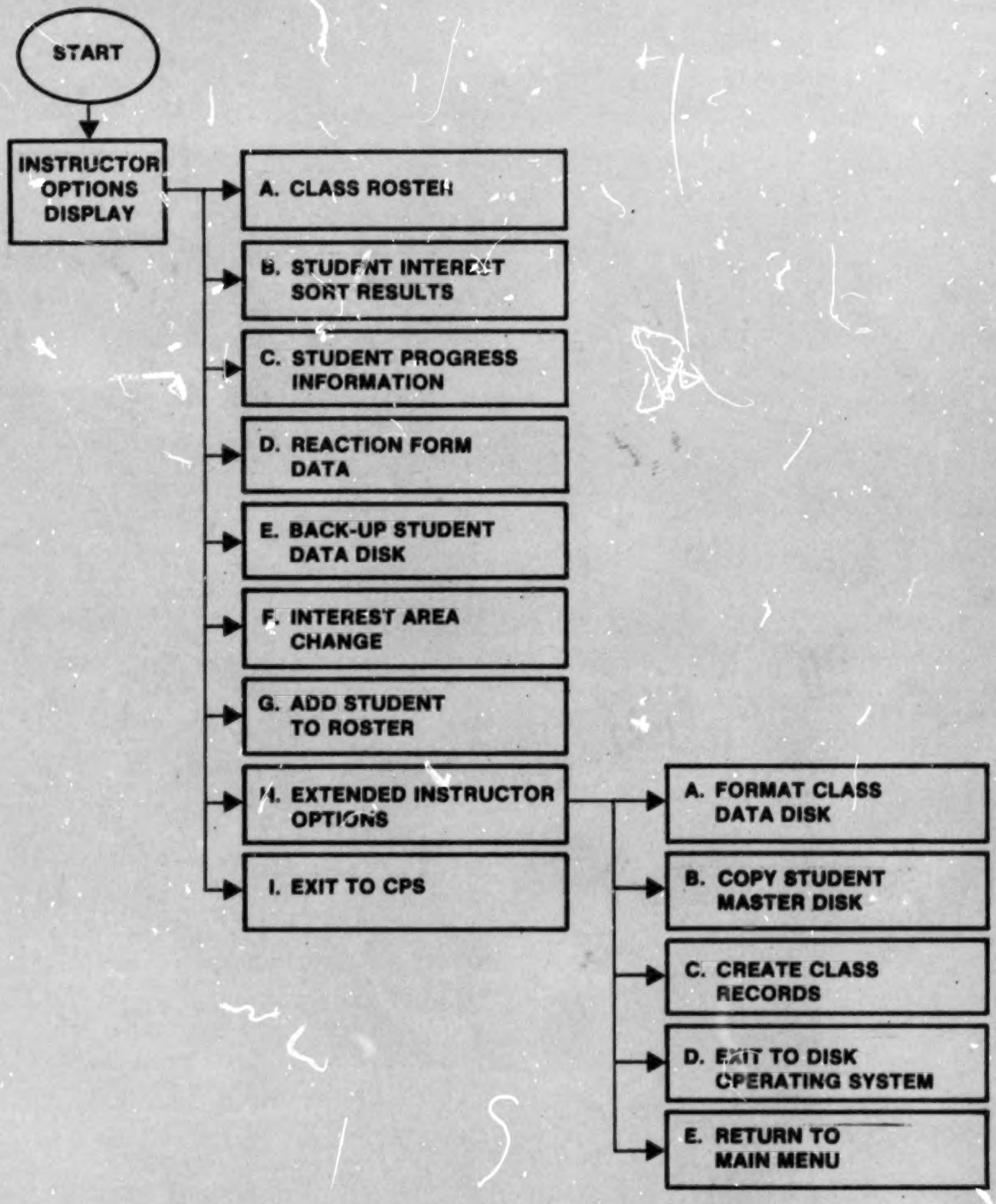
START
INSTRUCTOR OPTIONS DISPLAY
A. CLASS ROSTER
B. STUDENT INTEREST SORT RESULTS
C. STUDENT PROGRESS INFORMATION
D. REACTION FORM DATA
E. BACK-UP STUDENT DATA DISK
F. INTEREST AREA CHANGE
G. ADD STUDENT TO ROSTER
M. EXTENDED INSTRUCTOR OPTIONS
I. EXIT TO CPS
A. FORMAT CLASS DATA DISK
B. COPY STUDENT MASTER DISK
C. CREATE CLASS RECORDS
D. EXIT TO DISK OPERATING SYSTEM
E. RETURN TO MAIN MENU

Figure 4. Instructor Options

Using the CPS

Technical Procedures

The following pages describe the steps to take to get ready to use the CPS microcomputer hardware and software with your students, the procedures to follow to make and use back-up disks of your students' records, and the variety of options built into the CPS to facilitate your use of the package with your class.

Assembling the Hardware

You need the following hardware components to use the CPS:

1 Atari 800 microcomputer console with 64K of RAM
1 television set*
1 Atari TV switch box
2 Atari disk drives
1 Atari "Basic Language" cartridge
3 Atari power supplies, one labeled "9V AC, 15.3 VA" and two labeled "9V AC, 31 VA"
2 patch cords
1 power surge suppressor

The following steps explain all the procedures to follow in order to assemble the hardware "from scratch." You may be able to skip some of the steps if your school already has an Atari hardware system assembled. The Atari Operator's Manual (sections 4 and 5) and Disk Drive Operator's Manual include photographs and illustrations that will be helpful in accomplishing many of the steps.

1. Open the cartridge door on the top of the computer and insert the "Basic" cartridge into the space labeled "left cartridge."

2. Attach the TV switch box to the television set.

   A. Disconnect the antenna from the VHF terminals on the back of the set. If the antenna is the round, 75 OHM type with a screw-on connector, attach it to the matching 75 OHM connector labeled "antenna" on the side of the switch box. If the antenna is the flat, twin-lead 300 OHM type, attach it to the 300 OHM connector.

*These instructions for assembling the hardware assume that a standard television set will be used as the output device. To use a monitor rather than a television set, please consult the assembly instructions that come with your Atari 800.

B. Attach the cable labeled "TV" leading from the switch box to the VHF screw terminals on the television set. If your television antenna is of the 300 OHM type, your switch box is now installed.

C. If your television antenna is of the 75 OHM type, convert the television to accept the 300 OHM signal. Depending on the particular antenna connection you have, you must either--

- push a switch to the 300 OHM position,
- loosen screws holding a U-shaped slider and push it to the 300 OHM position, or
- screw the short wire on the antenna connection panel into the connector provided.

3. Plug the cord leading from the back of the console into the jack labeled "computer" on the side of the switch box.

4. Plug the power supply labeled "9V AC, 15.3 VA" into the jack labeled "power in" on the side of the console.

5. Plug one of the other power supplies into the jack labeled "pwr" on the back of one of the disk drives; plug the third power supply into the corresponding jack on the other disk drive.

6. Plug all three power supplies and the cord from the monitor into the power surge suppressor.

7. Plug one patch cord into the jack labeled "peripheral" on the side of the console. Plug the other end of the patch cord into either I/O (input/output) connector on the back of one of the disk drives. Designate this as Drive 1 by setting the drive code to the Drive #1 position: move the white tab in the slot left of the "pwr" jack to a position behind the black tab and on the left side of the slot.

8. Plug the second patch cord into the other I/O connector on the same disk drive. Plug the other end of the patch cord into either I/O connector on the other disk drive. Designate this as Drive 2 by setting its drive code to the Drive #2 position: move the black tab to a position beside the white tab and on the right side of the slot.

9. Flip the switch on the power surge suppresson to "on." The switch will light to indicate that the power is on.

10. Turn on both disk drives by flipping the switch on the front of each to "on." The drives will whirr for seven to ten seconds (until the "busy" light on the front of each drive goes off).

Preparing to Use the CPS

To begin using the CPS you will need the assembled hardware, your Instructor Disk, and your Student Disk. You have also received a Student Master Disk, but you will not need that disk until later.

Now, you will prepare your Student Disk by entering onto it data about the students in your class.

1. Make sure the console is <u>off</u> but that the disk drives are on and the "busy" lights on the disk drives have gone off.

2. Load the <u>Instructor Disk into Drive 1</u> and the <u>Student Disk into Drive 2</u>. To load a disk do the following:

   A. Open the door on the disk drive by pushing the button under the door.

   B. Insert the disk with--

      - the labels on the disk on <u>top</u> and
      - the long hole in the disk cover at the back.

   C. Push the disk in gently until it clicks.

   D. Close the door by pressing down on the latch.

3. Turn on the console and the television set and wait for approximately one minute while the computer loads the management system stored on the Instructor Disk. Adjust the volume on the television set as necessary. Switch to either channel two or channel three depending on your choice on the channel selection switch at the right side of the console near the console off/on switch.

4. Follow the instructions that appear on the display on the television screen. In order to follow these instructions accurately, you must remember two things:

A. "Press"--as in "Press RETURN to continue"--means that you are to press the single key mentioned in the instruction.

B. "Type"--as in "Type your student's first name"--means that you are first to type individual letters and, when you have finished typing all the letters you need, you are then to press the "RETURN" key to enter what you have typed.

5. When the display tells you to enter the instructor code, type the word "PHANTOM" and press the "RETURN" key. The letters you type will not appear on the display. This security device ensures that only you (and no students who might be watching over your shoulder) have access to the records of your class's progress through the CPS.

6. When the display shows you the menu entitled "Student Management System" (i.e., the main menu), choose "H. Extended Instructor Options," which will take you to another menu of options you can use. The "warning" display that appears immediately after you select "H" is a safety feature that will appear each time you go to the "Extended Options" menu to help you avoid doing anything inadvertently to destroy student records. Since you have not yet entered anything on this disk, there is nothing you can destroy and, consequently, no need to heed the warning at this time. For the present, simply type "yes" as requested to continue to prepare the Student Disk. In the future, respond to this and all other "warning" displays only after you have considered carefully the consequences of proceeding.

7. Select "C. Create Class Records" from this menu and read a short descriptive display. Then type "yes" in response to the "warning" display, and follow the instructions on the display to create the computer files that will store the individualized CPS records for as many as twelve students.*

   A. Type a student's first and last names as requested. Since each student will use the first name you type as his or her "CPS name," be sure to type the name the student prefers.

*You will need to create a new disk for each set of twelve students using the CPS. To create additional disks, first follow the procedures described on pages 23 and 24 of this Guide and then follow the procedures described on this page.

B. Enter a three-digit number of your choice for the student. This number--which can be any number between 100 and 998, inclusive--becomes the student's CPS code number, the number the computer will use to store the student's records and to route him or her on an individualized path through the CPS.

C. When the display asks if what you have typed is correct, type "yes" or "no" as appropriate. If you type "yes," the computer will instruct you to enter another student's data; if you type "no," the computer will erase your entry and give you the opportunity to begin again.

D. Follow these steps for each student who will be using the CPS. As a safety feature, the monitor will display an "error" message if you mistakenly type in a code number that you have already used. You will then have another chance to type in a code number that the computer can accept.

E. The instructor is encouraged to enter a "dummy" student name and number for use in demonstrations and for self-exploration of the system.

F. Type "DONE" as requested to indicate you have finished entering the data for all students.

8. Wait up to ten minutes while the computer compiles the data you have entered into a class roster. When this process has been completed, the "Extended Options" menu will appear on the display.

9. Select "E. Return to Main Menu" to get back to the "Student Management System" menu.

10. When this main menu appears, type "A. Class Roster" to look at the roster you created--a table showing all your students' first and last names and code numbers. Press "RETURN" to get back to the "Student Management System" menu.

11. Press "I. Exit to CPS" to get to the part of the CPS at which the student begins.

Using the Back-up Disk

What you have done until now is sufficient to get your students started on the CPS. There are other procedures you will follow throughout your students' work in order to keep track of their progress and to facilitate the computer's management of their experiences. Among the most important of these options is the series that allows you to create and update a back-up disk to provide insurance in case the original Student Disk (which will contain all your students' records) is either lost or destroyed. You should create this disk (as described next in A and B) within a few days of your students' initial work with the CPS; moreover, you should update this disk daily by following the procedures described in B.

Creating the disk

To create this disk you will start with--

- the Instructor Disk in Drive 1 and
- the original Student Disk in Drive 2.

Following the steps described on pages 21 and 22 of this Guide, activate the computer and get to the "Extended Instructor Options" menu. Then do the following:

1. Remove the Student Disk from Drive 2 and replace it with a factory-fresh blank disk that you have labeled "Student Disk 2."

2. Select "A. Format Class Data Disk" from the menu. Option A activates a hardware operation that must be done on a new disk before anything else can be entered onto it. Type "yes" in response to the warning display and press "RETURN." After checking to be sure the new disk is in Drive 2, press "RETURN" and wait about two minutes until the computer formats the disk automatically and returns you to the "Extended Options" menu.

3. Now select "B. Copy Student Master Disk" and type "yes" in response to the "warning" display to get to Atari's disk operating system. This system is not part of the CPS but is a program furnished by Atari to be used in conjunction with a variety of software created for this microcomputer.

4. Remove the Instructor Disk from Drive 1 and replace it with the Student Master Disk. Follow the usual procedures for removing and loading disks, leaving all the hardware "on" and simply making sure the "busy" lights on the disk drives are always out when you are inserting or removing a disk.

5. Select item "J" from the Atari menu and press the "RETURN" key. When the display reads, "DUP DISK--SOURCE, DEST DRIVES?" type the following sequence and press "RETURN":

   D1,D2

   After the display reads, "Insert both disks" (to provide a check to make sure you've completed step 4 above), press "RETURN" and wait four or five minutes while the computer automatically copies the management programs from the Student Master Disk onto the blank disk.

6. When the display reads, "Select item or return for menu," simply turn off the console.

Updating the disk

You have now created a Student Disk that is just like the one you received with your original set of CPS materials. To make this disk useful to you as a back-up disk, you must now copy the class roster you created on the original Student Disk onto this one. To do this, you will start with--

- the Instructor Disk in Drive 1 and
- the original Student Disk in Drive 2.

Follow the usual steps (as described on pages 21 and 22) for activating the computer and getting to the "Student Management System" menu (the main menu). Then do the following:

1. Select option "E. Back-up Student Data Disk" to copy your students' records from the original Student Disk onto the new one. Read a short descriptive display reminding you to make sure the original Student Disk is in Drive 2 and referring you to this Guide for further instructions.

2. Following the usual procedures for removing and loading disks, remove the Instructor Disk from Drive 1 and replace it with Student Disk 2 (the disk you just created). When you press "RETURN," the display will remind you that you must make this replacement in order to continue.

3. Press "RETURN" again to go directly to the disk operating system. Select item "J" from the Atari menu and press "RETURN." When the display reads, "DUP DISK--SOURCE, DEST DRIVES?" type the following sequence and press "RETURN":

   D2,D1

   After the display reads, "Insert both disks" (as a safety check, press "RETURN" and wait five to seven minutes while the computer automatically copies the student records from the original student disk onto the back-up disk.

4. When the display reads, "Select item or return for menu," turn off the console.

5. Remove the back-up disk from Drive 1 and store it in a safe place (away from magnets, electric motors, heat, x-rays, etc.) until you are ready to use it again.

6. Follow the steps described in this section at the end of each day's work in order to keep a current back-up record of your students' progress. Each time you use option "E" as described, the computer will automatically copy all the information on Student Disk 1 to the appropriate sections on Student Disk 2. Then, if something happens to either disk, the other will be ready to replace it.

7. <u>If either Student Disk becomes unusable, copy the remaining good disk on a fresh one as described earlier to create a new back-up disk.</u>

Other Instructor Options

The previous section described the options you will use to get your students and your record keeping started on the CPS. The Instructor Disk also offers you a variety of other options, which you can use throughout your students' experience with the program. Each option and the conditions under which it is to be used are described next. All the options will be selected from the "Student Management System" menu, since you need the options from the "Extended Instructor Options" menu only to create the materials described earlier.*

*Option "D. Exit to Disk Operating System" on this menu is <u>not</u> to be used in the classroom. This option allows the CPS programmers to enter the system in order to correct any programming errors that might interfere with student progress.

To gain access to any option, you will follow basically the same following sequence of steps you used earlier:

- Turn on the disk drives.
- Load the Instructor Disk in Drive 1 and the Student Disk in Drive 2 when the "busy" light goes out on the disk drives.
- Turn on the console.
- Follow the instructions on the display, including entering your instructor code when requested.
- Choose the option that addresses your current need.

A. Class Roster

Select this option to see a list of the first and last names and the CPS code numbers of all the students working on the CPS.

B. Student Interest Sort Results

After selecting this option, type the CPS code number of any student whose list of Interest Areas you want to see. Press "RETURN" and the display will show the student's name, the Interest Area in which he or she is currently working, and the list of all the student's identified Interest Areas in order of preference, as computed during the Interest Sort.

C. Student Progress Information

Use this option to see a record of any student's linear progress through the CPS and to determine precisely where that student is currently working. Type the student's CPS code number and press "RETURN" to see one or more displays listing--in order as completed--all the components of the CPS the student has completed. The last item on this list will be the component the student has most recently completed.

D. Reaction Form Data

Select this option to see a summary of any student's answers to the questions on the computerized Reaction Forms for Activities and Briefs. Type the student's name and code number and press "RETURN" to see a series of displays integrating the student's answers (A's, B's, and C's) to the following questions on the Activity Reaction Forms:

- How much did you like this Activity?

  A. A lot
  B. A little
  C. Not at all

- How well did you do in this Activity?

  A. Very well
  B. Fair
  C. Not so well

The possible responses on the Brief Reaction Forms are as follows:

- Would you like to do the kind of work you learned about in the Brief?

  A. Yes
  B. Maybe
  C. No

- Could you learn to do good work in this job?

  A. Yes
  B. Maybe
  C. No

The answers will be presented in order (e.g., Lawyer Activity, Lawyer Brief, and so forth) according to the student's linear progression through the CPS.

F. Interest Area Change

NOTE: The CPS management system is designed to provide a structured student interaction. This Interest Area change feature permits the instructor to allow a student to depart from the structure. Great care must, therefore, be taken in using this feature, since it could produce multiple versions of a student's reaction to the same Interest Area.

Use this option to allow a student to return to an Interest Area that the student has previously completed or to go to an Interest Area that was not indicated by his or her original Interest Sort. Since this option involves moving the student out of the normal CPS flow, it can be used only during the time between a student's Exit Interview for a particular Interest Area and his or her next sign-on to use the CPS (i.e., during the time in which the student is not actually involved in any of the computerized components of the CPS).

To use the option, first type the student's CPS code number and press "RETURN" to see a display of the student's Interest Sort results, including an indication of the latest Interest Area in which the student has worked. Next, press "RETURN" to see a numbered list of all the CPS Interest Areas. Type the number of the Interest Area desired by the student and press "RETURN" to reset the student's Interest Area start flag at the beginning of the new Interest Area. (Pressing "RETURN" without typing a number will send the computer back to the "Student Management System" menu.) The next time the student signs on to use the CPS, he or she will be routed automatically to the new Interest Area; this change in progress will appear in the student's tracking data after he or she has completed one program in that Area (but not before).

G. Add Student to Roster

Use this option to create computer files for any students who begin their work on the CPS after you have created the roster for the rest of the class. Follow the instructions on the displays to add a student's files. If a display indicates that there is not enough room to add a student to an existing disk, follow the instructions previously given for using the back-up disk and creating the disk to make new disks as necessary.

I. Exit to CPS

Use this option to leave the CPS management system and send the computer to the CPS instructional programs. After choosing this option, remove the Instructor Disk from Drive 1 but leave the Student Disk in Drive 2.

Additional Technical Information

The previous material described all the options listed on the CPS management system menus that you can use to facilitate your work with this package. In addition to being aware of these options, you should know some other technical information to use the CPS effectively, such as the following:

1. "Control 3"

This function is included in all CPS instructional programs to provide an exit from the CPS in case the system fails, for any reason, to move ahead. To use this function, hold down the "CONTROL" key while at the same time pressing the key marked "3." This will return the computer to the first "Welcome to the CPS" display, regardless of the disk in use at the time. Once the "Welcome" display appears, press "RETURN" to continue in the CPS.

2. Cold-Start

This is another function to use in case of a lock-up (i.e., failure to move) in the CPS. If the "Control 3" function is unsuccessful, simply turn the console off and on quickly to return to the copyright display (if the Instructor Disk is in use) or to the "Welcome" display (if the disk in use is part of the instructional program).

3. Boot Error

The words "BOOT ERROR" on the display indicate that something has gone wrong in Drive 1. To deal with this kind of error message, first check the disk in the disk drive to make sure it has been inserted properly.

4. Miscellaneous Problems

If all else fails, consider trying the back-up copy of the Student Disk. The working copy may have been damaged. If this approach is successful, make a new back-up disk at once.

5. Turning Off Equipment

There is no special order required for turning off the equipment.

Instructional Procedures

Once you have assembled the hardware and created the Student Disk, you are ready to help your students begin their work on the CPS. This section describes the general steps you and your class will follow to use the CPS from beginning to end. You will need to refer to the previous section for information on the computer functions available to you throughout this instructional sequence.

To start each new session with CPS, Microcomputer Version, the instructor should follow the directions provided on pages 21 and 22, steps 1 through 5 inclusive. To get to the part of the CPS at which the student begins, the instructors then press "I. Exit to CPS."

Student Guide

Each student will refer to his or her copy of the Student Guide in various ways throughout the CPS. Use of the Guide is closely integrated with all the computer-based experiences as part of the comprehensive approach to career planning provided by the CPS. The Guide later forms the student's personal record of his or her experiences with this package.

1. Give each student a copy of the Student Guide and ask each to write his or her name on the cover and to read page 3.

2. Assign to each student a CPS name and code number (the name and number you entered for each student on the Student Disk) and have the class write this information on the lines designated on page 3. Explain that each student will always type his or her name and number to sign on to the computer when using the CPS.

3. Have a student enter this information on the computer keyboard. When the display instructs the student to load the Introduction Disk, assist him or her as necessary in following the steps on page 4 in the Guide. Since the student will follow these steps each time he or she loads a disk, it is important that independence in performing this skill be encouraged from the beginning. Of course, the Student Guide can be used for reference by the student at any time.

4. From this point on, the student's activities will occur primarily on the computer. He or she will return to the Student Guide frequently, but only in response to instructions on computer displays.

Introduction

The "Introduction" consists of activities designed primarily to familiarize the student with the CPS--its goals, structure, procedures, and vocabulary. Throughout this section, the student should follow the instructions on the computer displays to become acquainted with the overall workings of the CPS.

1. First, the student encounters general information about using the computer and about the content, goals, organization, and vocabulary of the CPS itself. The student reads and responds to displays that initially convey information and then require student interaction based on that information. The student completes some computerized activities (charts, word-search puzzles) designed to help him or her remember the names of the CPS components and the way these components fit together. The student is then directed to the Student Guide to complete charts similar to those completed on the computer, both to reinforce understanding of the information and to provide a ready reference to it.

2. At this point the student encounters for the first time an option that will be increasingly important as work on the CPS continues. This option--which appears on a separate display as a full-screen "Stop" sign--allows the student to leave the CPS at this point and return automatically to the same point when he or she next signs on. The option, then, enables the student to reenter the CPS at logical breaking points within certain segments so that he or she does not have to redo portions of the segments already completed. To use the "Stop" sign option, the student presses the "OPTION" key; to bypass it, he or she presses "RETURN" to continue in the CPS. Although the "Stop" sign appears throughout the CPS, only its first few occurrences are noted in this Guide to enable you to become familiar with it.

3. Next, the student returns to the computer, as directed, to encounter vocabulary about the concepts he or she is to think about throughout the CPS--interests, abilities, skills, and so forth. As before, the student does some computerized activities (crossword puzzles) designed to help him or her remember this vocabulary and then returns to the Student Guide for an activity designed to provide reinforcement and reference. The "Stop" sign option occurs again at the conclusion of this segment.

4. After this activity, the student is directed to read page 13 of the Student Guide, which introduces a section entitled "Other CPS Words." These are words about occupations ("goods," "services," and so forth) and about educational

preparation for work ("college," "apprenticeship," and so forth) that students will encounter later in the CPS but will not need in the early stages. Moreover, students will encounter this vocabulary differentially, according to their progress through the System; not all students, for example, will explore occupations in which the term "apprenticeship" is used. The terms are included as a separate section of the Student Guide to avoid overloading the computerized Introduction with vocabulary that will not be used for a long time and that will, in some cases, be irrelevant to students' individual needs. Page 13 of the Student Guide explains to the student that these terms are included for reference as needed.

Interest Sort

This segment of the CPS presents a series of fifty statements about aspects of various CPS occupations (working outdoors, helping people with their problems, and so forth). Each student's responses to these statements provide the basis for his or her individualized movement through the rest of the CPS.

Because the goal of the CPS is to expand students' awareness of possible interests rather than narrowing their exploration to only a few, the Interest Sort statements are designed to route students to a large number of Interest Areas rather than to only two or three. While students should be encouraged to explore all the Interest Areas in which they find themselves, any student who is unwilling to pursue a particular Interest Area is free to leave it after the Probe.

1. After the student has signed on to the computer (if necessary), he or she receives a brief explanation of the task and objectives at hand.

2. Then, as each statement appears in turn, the student responds to indicate the degree of interest he or she has in it:

   A. A lot
   B. A little
   C. Not at all

3. After the student has entered all his or her responses, the computer compiles the results into an ordered listing of the student's Interest Areas. The list is based on the student's "A" responses and includes as few or as many of the ten CPS Interest Areas as seem of interest.

4. When the student's list of Interest Areas appears on the display, the student is instructed to copy the list into his or her Student Guide for reference. The "Stop" sign option is available to the student at this time.

Interest Areas

As noted in figure 2 on page 13, there are ten Interest Areas in the CPS. The particular areas were identified not to reflect traditional occupational clusters but rather to highlight interests middle-school students might currently hold or wish to explore. By helping students think about what they like in the present rather than what they might like years in the future, the Interest Areas help students to deal with the concreteness of actuality rather than the abstraction of speculation.

Probes

The CPS includes ten Probes--one for each Interest Area. Each Probe presents a brief introduction to an Interest Area, provides an opportunity for students to consider some aspects of the Interest Area in relation to themselves, and introduces four workers representative of the Interest Area whose occupations the student can explore.

1. When a student either signs on to the computer (if necessary) after completing the Interest Sort or continues directly from the Interest Sort without a break, a display indicates which disk to load to see the Probe of the Interest Area he or she rated most highly in that earlier activity. The almost instantaneous appearance of this information is the first example the student encounters of how the computer will automatically route him or her to specific components of the CPS according to the results of the Interest Sort. This kind of routing will continue throughout the student's CPS experience as the computer updates the student's records and advances his or her starter flag on the basis of the Probes, Activities, and Briefs he or she has completed.

2. If the student loads a disk other than the one indicated on the display, the screen will display an "error" message and tell the student again which disk to load. This safety feature appears throughout the CPS to guard against either deliberate or inadvertent loading of wrong disks.

3. After loading the appropriate disk, the student reads several paragraphs about the general characteristics of work related to the Interest Area. Next, the student encounters a series of ten statements related to the activities of the Interest Area and responds "yes" or "no" to indicate whether the student can make each statement about him- or herself. The statements, which are similar to the statements in the Interest Sort but are focused more specifically on the characteristics of the work to be encountered in the Interest Area, are designed to help the student reflect on the relationship of these characteristics to personal interests, abilities, and skills. The "Stop" sign option appears at the conclusion of this segment.

4. The student next meets four imaginary workers, who explain their job tasks as these will be simulated in the Interest Area's occupational Activities. These workers are representative of the Interest Area both in the range of their job tasks and in the levels of skill and experience found in their jobs. Taken together, the workers provide a general sense of the career opportunities in the Interest Area. Again, the "Stop" sign option can be used at the end of this segment.

5. Finally, the student is asked to decide upon his or her next step--choosing an Activity to explore, reading about the workers again before deciding upon an Activity, or leaving the Interest Area. The computer displays the student's next step, depending upon his or her choice.

Exit Interviews

Each time a student decides to leave an Interest Area, he or she is directed to talk with you. This talk is termed an "Exit Interview" and is intended to assist you in your role as facilitator of your students' experience with the CPS. Although it is assumed that few students will leave an Interest Area before exploring any of its Activities, information about this process is provided here, both in case you need it at this time and for your later reference as appropriate.

1. When a student comes to you and explains that he or she has finished working in a particular Interest Area, you should take this opportunity to help the student explore his or her feelings about the Interest Area and, if the student has left it after only minimal exposure, the reasons for this decision. Since it is important for the student to maintain control over the experience, this interview should be supportive rather than directive. If

appropriate, the discussion may be based on the Reaction Forms completed by the student during work in the Interest Area.

2. If, during any Exit Interview, a student indicates a desire to return to an Interest Area already completed or responds to your suggestion that such a return might be appropriate, execute an Interest Area change by following the procedures on pages 27 and 28 of this Guide. This option has been included in the CPS to enhance the flexibility of the system in responding to students' needs. The option--which may be used only during an Exit Interview, when a student has signed off from one Interest Area but has not yet begun work on another--ensures that a student will not be prevented from exploring occupations that might spark his or her interest in retrospect.

3. When Exit Interviews with several students indicate that they have finished one or more Interest Areas and may profit from discussing their experiences with one another, you may arrange for the group to use one or more of the supplementary activities described in a later section of this Guide. For groups of students who have finished work in the same Interest Areas, you may suggest some of the specific Interest Area activities also included in that section.

Activities

The CPS includes forty interactive Activities designed to simulate the job tasks of the forty occupations that can be explored through this instructional package. The Activities are wide ranging--including such tasks as the visual problem identification of the landscape gardener, the computation of the roofer, and the form completion of the lawyer--and are designed to give students a "feel" for each of the occupations they represent. Although the Activities thus have a variety of content, they all follow the interactive format described as follows:

1. After signing on to the computer (if necessary) and loading the appropriate disk, the student reads a brief overview of the job tasks performed by workers in the chosen occupation. The student is asked to imagine him- or herself as one of these workers doing a specific task and is presented with a list of from one to four objectives for the Activity.

2. Next, the student follows display-by-display directions to perform the Activity.

3. Then, the student is asked whether he or she liked doing the Activity. An affirmative response sends the student first to a list of activities external to the CPS that he or she may try, and then to a Reaction Form, Part 1, display; a negative response sends the student directly to the Reaction Form, Part 1.

4. The student responds A, B, or C to two questions on the Reaction Form display--"How much did you like this Activity?" and "How well did you do in this Activity?"--and the computer stores these responses on the Student Data disk. Later, the computer will use the student's proportionally weighted responses on all his or her computerized Reaction Forms to compute an individualized list of up to ten CPS jobs that are of greatest interest to the student.

5. Now, for the first time since the Interest Sort, the student is directed to the Student Guide. The student is told to find Part 2 of a Reaction Form (located on pages 29-50 of the Guide), to write the name of the occupation just explored at the top of the form, and to answer the three questions on the form. The student's answers, which may be as brief as a phrase or as long as a paragraph, will be used during later discussion with you or a counselor to formulate an Education Plan.

6. The student returns to the computer to be asked whether he or she wants to know more about the occupation. An affirmative answer routes the student automatically to the occupation's Brief. A negative answer sends the student to a "decision" display that enables him or her to choose an Activity from the Interest Area, return to the Probe to read about the Interest Area workers in preparation for choosing an Activity, or leave the Interest Area and seek you out for an Exit Interview. Choosing one of the first two alternatives enables the student to continue working on the computer in customary fashion, while choosing the third sends the student to you for the procedure described on pages 35 and 36 of this Guide.

Briefs

The CPS includes forty occupational Briefs, one for each of the CPS Activities. The Briefs follow a consistent format to provide sketches of the kinds of information the student should consider when making career choices--additional job tasks, work environment, educational preparation, salary range (as of 1982), and so forth.

1. After signing on to the computer and loading the appropriate disk (if necessary), the student is reminded of the content of the related Activity, reads the two objectives for his or her work with the Brief, and again meets the worker in this occupation who was introduced in the Probe.

2. Next, the student reads several displays giving some basic information about the occupation, before coming to the menu display of questions to ask the worker in order to learn more about a job. The menu includes six questions, and the student must ask any four of them in any order to complete the program. The student simply types the letter of a question to see the question and its answer on the following display(s). After each answer the student is returned to the menu to select another question. A subroutine in the program keeps track of the questions asked, keeps the student from repeating any questions, and displays when the student has asked the four questions necessary to complete the Brief. At this point, the student may ask one or both of the remaining questions or go immediately to the Reaction Form display.

3. Each time the student asks question "F. How can I become a(n) (occupational title)?" a series of displays appears on the screen. The first display directs the student to find a blank Career Plan page in the Student Guide (located on pages 51-62), to write the occupation title on the page, and to prepare to "write down the things to do to become a(n) (occupational title)." The information the student copies from the next several displays--courses to take now, activities to do now, and things to do after high school--will be used in the design of the student's Education Plan.

4. The student completes the Reaction Forms for the Brief as he or she did for the Activity. First, the student responds A, B, or C on the computer to two questions on a Reaction Form, Part 3--"Would you like to do the kind of work you learned about in the Brief?" and "Could you learn to do good work in this Job?" The computer stores these proportionally weighted responses for later use in computing the student's individualized list of jobs of greatest interest. Then, the student is directed to find in the Student Guide Part 4 of a Reaction Form (which is on the back of Part 2 of the form, the part the student completed for the Activity), to write the occupational title on the form, and to answer three questions. Again, these written elaborations of the student's computerized responses will be used in the design of the Education Plan.

Education Plan

Once the student has completed all the Activities and Briefs of interest, he or she--in conference with you or a counselor--designs an Education Plan incorporating the self-knowledge gained from the CPS experience. Developing this plan, which is the culmination of the student's work with these materials, proceeds according to the following steps:

1. After the student signs on to the computer (as necessary) and the system indicates that the student has completed work in all his or her identified Interest Areas, the computer routes the student to the Education Plan section. The student loads the appropriate disk, reads the introductory information and objectives for this segment, and waits momentarily while the console computes the weighted Reaction Form responses and compiles an ordered list of as many as ten CPS jobs in which the student indicated the greatest amount of interest.

2. The student is directed to copy this list into the Student Guide (page 65) and to use it as the starting point for examining his or her overall feelings about various occupations. The student should consider all his or her Reaction Forms (Parts 2 and 4) and Career Plans before working with you or a counselor to develop an Education Plan.

3. The student takes the Student Guide to this planning session and uses its relevant sections as the basis for the joint student-teacher or student-counselor completion of a two-page Education Plan (pages 69-88) for each occupation the student would like to explore further. The eight questions on the plan are designed to focus the student's planning efforts and to provide initial suggestions for implementation. The student-teacher or student-counselor team may complete plans for as few or as many (up to ten) occupations as the student wishes.

4. When the student has completed one or more plans, he or she should select one (if necessary) and begin to implement it. Your and/or the counselor's assistance should be available to the student as necessary and as practical.

More About Your Role

In addition to facilitating the student's use of the CPS as explained in the previous section, your primary roles are (1) to create an environment in which reflection, clarification of values, and development and practice of planning and decision-making skills can take place and (2) to help make information in the CPS locally relevant in order to provide a basis for student planning. Things to keep in mind as you create the appropriate environment are described next; ideas for making the CPS locally relevant are described at the conclusion of the "Supplementing the CPS" section of this Guide.

1. Within the format of the CPS, identifiable characters are developed in the Probes and carried through in the occupational Briefs. Because of this, each worker naturally has a sex, a name, and a particular appearance. While attempts have been made not to reinforce prevailing stereotypes based on sex, ethnic groups, or other factors, identification of occupations with particular groups might be inferred.

   It is important, therefore, that you encourage the students to look beyond sex and other noncareer-related kinds of grouping. For example, you might point out that, although a waiter is depicted in the "Helping" Interest Area, the information presented applies equally to waitresses.

2. The Activities in the CPS provide an opportunity for the student to "try on" various worker roles in a nonthreatening atmosphere. The Activities are part of an exploration process--of gaining information about self and work. For this reason, it is important that you, as facilitator, refrain from making judgments about how well the students perform on particular Activities. (In many cases, required skills are developed through training, education, and experience.) It is much more important that students examine their feelings about the Activity, considering whether they like it and what in particular they like about it. In this way, students develop knowledge about themselves that can be applied to other occupations and other contexts.

3. The Interest Sort has been designed to examine youthful activities, primarily those of leisure time or school work. They are keyed to work-related activities based on the same interests. As the student responds to the interest statements "a lot," "a little," and "not at all," he or she should weigh interests on the basis of the present rather than the future. The student's self-awareness in the

present is the entry point into career planning for the future. Time enough will be spent on forward-thinking exploration through the CPS.

Your bringing this to the student's attention may help them to resist the temptation to jump ahead and think about whether they would like doing a particular activity for a living rather than whether they enjoy it now.

4. The CPS is intended to be a vehicle for widening career options while moving toward making a plan for career development. Therefore, it is important that the students avoid premature closure upon single occupations and focus on identifying groups of jobs to which similar preparation may lead.

   No attempt has been made in the CPS to cover the entire spectrum of jobs in any occupational group. The four sample jobs in each Interest Area should give students a taste of the kind of work that is found in the area and the worker interests upon which it draws. Students should not be content simply to scan occupational information in hopes of finding the "right" occupation. Rather, in the CPS, they must examine their own interests in relation to jobs, mindful that their interests may change over time and that they will need to be able to reexamine their interests throughout their lives. That is, students should be seeking <u>patterns</u> of occupational interest within which they can maintain open options, even as they pursue careers in particular occupations.

   You should encourage the students to explore freely, within the CPS and beyond, recording their responses fully and honestly as they proceed. Thoughtful record keeping will make it possible for them to seek out commonalities of interest among jobs. But, beyond this, such record keeping will enable them to be freer in their exploration. They can explore secondary interests without fear of getting "off the track" of what interests them most. Indeed, exploration of secondary interests can serve to enlighten students about themselves and the reasons they like some areas better than others. The more information students record in the <u>Student Guide</u>, the greater their understanding of their responses is apt to be. Then, after any number of "dead ends" or less interesting probes into occupational areas, students can return to the areas that interest them most and initiate further exploration and development of an educational plan.

5. The students' focus should be directed periodically from occupational information acquisiton to the processes of gathering information about themselves in relation to work, and to using that information to make informed decisions about the future.

   Planning and decision-making skills must be developed over a long time, beginning in childhood and continuing into adulthood. Students should, at this juncture in their career-planning process, be devoting enough thought and practice to those skills that they will be able to draw upon them whenever it is appropriate (whether because of changing interests or changing job market) for them to reevaluate their career directicns.

6. Discussion of worker priorities and satisfactions should accompany individual work in the CPS. As students gain more insight into their own preferences, they should be encouraged to identify those preferences in relation to occupations so that they will be better able to understand their responses toward areas of work and to use that understanding to guide their exploration.

Supplementing the CPS

Additional Activities

Although the CPS is essentially an individualized, self-paced instructional package that focuses on growth in self-awareness rather than on interpersonal concerns, students should recognize that growth comes through interaction with others as well as through solitary reflection. This section contains ideas for discussions, games, and other activities that you and pairs or other small groups of students may use to enhance their personal growth. The section includes two subsections--General Activities, and Interest Area Activities--on which you may draw according to your students' needs. Ideas in each section are presented in a broad, undetailed form to keep them as flexible as possible so that you can adapt them easily to your particular situation.

General Activities

The following suggestions of discussion topics and activities relate to concerns and considerations of the CPS as a whole. The suggested supplements may be used during students' computer-based experiences or after them to help students internalize and expand upon what they have learned.

Discussion topics

- Decisions

  Have each student name some of the decisions he or she made today. Remind the students to think about each choice they made since they woke up, no matter how small. Discuss how these decisions affected their lives today.

- Decisions

  Remind the students that we make decisions each day--small ones and sometimes big ones. We will spend our lives making decisions. Some of them, like choosing a course of education or choosing a career, will have long-lasting effects on us. Our decisions will affect our happiness in life. Discuss how career decisions affect our happiness.

- Decisions

  Discuss whether students have ever been sorry about decisions they made. Did they wish they had done something else? Can they think of some ways they could have avoided making the "wrong" decisions?

- Decisions

Explain that to make a decision that is right for you, you should ask yourself what options are open to you. There are two kinds of options:

1. Know existing options (options that exist and that you know about).

2. Unknown options (options that exist or that might exist but of which you are unaware).

Discuss using the following four steps to make sure you know all the options:

1. Tell what the decision is and when it must be made.

2. Write down the existing options you know about.

3. List where you can get help in finding out about new possibilities.

4. Go to these sources and find more options.

Have the students add the new options to those listed in step 2. Then discuss the four steps as they apply to this situation:

> You go to a large junior high school. You have never thought much about what you want to study in high school. You have recently become interested in taking a lot of math in high school so you can get into a certain technical program later. But you have never been very good in math.

- Goals

Explain that a goal is something a person wants to be or to have. Note that, as people go through life, their goals often change.

Discuss what students think they would like to be (including in their careers) at the following times in their lives: ages 16, 18, 22, 28, 35, 50, 65, and 75.

- Goals

Goals can also be what we want to have. These goals, too, can change. Discuss what students would like to have at each of the ages listed previously.

- Goals

  Discuss the importance of money for attaining goals. Is it important? Is it most important? What do students want to be and to have that doesn't require money?

- Planning

  Explain that planning involves making decisions about your goals and how to reach them. Discuss each of the following steps in planning as these relate to careers:

  1. State your goal.

     Decide what you want.

     Say all you know about your goal.

     Say how much you want your goal.

     Say all you know about yourself in relation to your goal.

  2. Collect and consider facts about your goal.

     Decide what kinds of facts you need.

     Look at each fact. How does it relate to your goal.

     Sources of facts:

     - things to read
     - people to talk to
     - things to do
     - things to think about.

  3. List the possible ways to reach your goal.

     Which ways are safe?

     Which have some risk?

     Which way is most likely to get you to your goal?

4. Choose a way.

   Decide which way is best for you.

   Decide what to do now and what to do later.

   Think about problems (e.g., getting money for schooling) that might arise and about how you can solve them.

5. Act.

   Take the first steps to put your plan into action.

- Planning

  Explain that planning involves choosing strategies for reaching a goal. Discuss the following common strategies as they relate to careers:

  Wish strategy: Choosing the most desirable result, regardless of risk.

  Safe strategy: Choosing the least risk.

  Combination strategy: Choosing what is both safe and desirable (but not necessarily the safest or the most desirable of all).

  Escape strategy: Choosing to avoid the worst result.

  Impulsive strategy: Taking the first choice; using little thought; not looking at all the facts.

  Compliant strategy: Following someone else's plans; letting someone else decide.

  Delaying strategy: Putting off a decision; not thinking about it.

- Job characteristics

  Discuss each of the following questions:

  How would you feel about a job in which you had to work mainly with your hands?

  How would you feel about a job in which you worked outdoors all the time?

How would you feel about a job that was uninteresting but that paid very well?

How would you feel about a job that left you a lot of free time?

How would you feel about a job in which you were satisfied that you were doing well?

How would you feel about a job that permitted you to invent new things, design new products, or develop new ideas?

How would you feel about a job in which you had to plan and lay out work for others to do?

How would you feel about a job that had pleasant conditions --not too hot, too cold, noisy, dirty, and so forth?

How would you feel about a job in which you had a fair supervisor with whom you could get along?

How would you feel about work that let you live the kind of life you choose and be the type of person you want to be?

How would you feel about a job in which you had important responsibilities?

How important would it be to you that other people respect your job?

How would you feel about a job in which you had a lot of contact with your coworkers?

How would you feel about a job in which you had to be a leader?

How would you feel about moving from your home state?

How would you feel about a job in which you could work on your own most of the time?

How would you feel about a job in which you made beautiful things and contributed beauty to the world?

How would you feel about a job in which you could work in your own way, as quickly or as slowly as you wished?

How would you feel about a job in which you could do different types of work?

How would you feel about a job with security (you could be sure to keep it for a long time) but with little chance for advancement?

How would you feel about a job that promised rapid advancement but in which you were reevaluated every six months?

How would you feel about taking whatever job is available in a worthwhile public service helping other people?

How would you feel about a job in which you had to learn new skills all the time?

Activities and games

- Listing

  Choose one worker. Through discussion, make a list of all the other workers on whom this worker depends to perform his or her job. Make another list of all the ways in which the worker is depended upon by other people.

- Listing

  Have each student make a list of everyone in the class. Beside each name have the student write an occupation he or she thinks fits the other students. Have students share and discuss their lists to see whether the lists agree with students' self-perceptions.

- Matching

  Depending on the Interest Areas that have been explored by the participating students, create a matching game. Make two columns, the first listing occupations or areas of work and the other listing one characteristic associated with each of the occupations. Have students match the items in Column B with the items in Column A. See the example that follows:

A Occupations	B Characteristics
Cook	creativity
Cartoonist	strength
Telephone operator	good reading skills
Sanitation worker	friendliness
Library assistant	good sense of taste

- Charades

  Play a game of charades using the names of the Interest Areas as answers and acting out occupational duties as clues.

- "What's My Line?"

  Play a game similar to "What's My Line?" based upon the CPS occupations. In this game, the person taking the identity of a worker answers "yes" or "no" to questions asked by the other students about job duties, skills, educational preparation, working conditions, and so on related to the occupation. The class then tries to guess the occupation from the "worker's" answers.

- "Twenty Questions"

  Play a game of "Twenty Questions" in which the person whose turn it is thinks of an occupation, a tool, a skill, or another job-related item or characteristic. The other students try to guess what the student is thinking of by asking questions that can be answered "yes" or "no."

- "Tools of the Trade"

  This game, which is to be played by students who have explored the same Interest Areas, requires two teams with one to three students on a team.

  1. Each team writes names of occupations on separate slips of paper. Between them, the teams should have at least ten occupations.

  2. The slips of paper are put into a box, bag, or pile.

  3. To begin the game the first person on Team One picks an occupation and names a tool that would be used in that occupation.

  4. One point is awarded for every correct tool named.

  5. Then the first member of Team Two has a chance to name another tool a person in the same occupation could use.

  6. After students have named all the tools they can, the next person in turn picks another occupation.

  7. One team can challenge the person on the other team who named a tool. To get the point, the challenged

person must be able to explain how a worker uses the tool.

8. The winner is the team that has accumulated the most points.

- Role play

  Pose a problem to be solved or ask a student to suggest one--an imaginary community problem, a problem currently in the news, or another kind of problem touching many people's lives. Then have each student select an occupation to role play during an activity in which the class plans how they can help solve the problem and what each of them can bring to the solution. For example, a lawyer can bring legal or political skills; a carpenter, the ability to build; and so on. Assist the students as they plan their strategies for arriving at the solution, determining individual role responsibilities as they work.

Interest Area Activities

The following suggestions of discussion topics and activities relate to particular Interest Areas in the CPS. Many of the suggestions can be easily adapted for use with other Interest Areas as well.

Any Interest Area

- Discussion topics

  In the future, will _____ occupations be needed more or less?

  What if there were no _____ or _____? Who or what would perform their duties? Do you foresee any problems?

  What do you think are the three most important abilities for people in _____ area of work? How would not having these traits affect the worker on the job?

- Activities

  Choose an occupation that interests you. List all the equipment and supplies a worker in that occupation uses.

Choose something around you that has been built (or written or performed or designed). How would you change it?

Choose a Probe of the CPS. List five other occupations that might be in that Probe and tell why.

Specific Interest Areas

A. ADVISING

- Discussion topics

Think of something you know how to do well (play a game or a musical instrument, memorize, and so forth). How would you teach someone else to do it? Plan the steps you would take.

If a friend of yours wanted to get a summer job but had never worked before, what would you tell your friend to do?

If you wanted to apply for a job at the neighborhood supermarket, what would you say to the manager? How would you get him to give you the job?

- Activity

Get a copy of a job application. Fill it out. Are there any facts you don't have that you need?

B. BUILDING AND MAKING

- Discussion topic

Imagine that there were no nails. What would be used in their place? What would be the advantages and disadvantages?

- Activity

Choose something around you that has been built. Look at its construction. How was it made (step by step)? How much of each kind of material was used? Would you change the way it is made? How? Why?

C. DOING CLERICAL WORK

- Discussion topics

How would the jobs of business people change if there were no secretaries or clerks?

What do you think is the most important skill of a clerk?

- Activity

  Get permission to watch what goes on in the school office. What tasks are like those explored in the Doing Clerical Work Interest Area?

D. HELPING

- Discussion topic

  How do you feel when you help someone? How do you feel when you could help someone but don't? How do you feel when someone needs help but you can't or don't know how to help?

- Activity

  Watch a waiter or waitress the next time you are in a restaurant. Is the person good at the job? Is the person pleasant? Is this important? What things does the person do for the customer?

E. HELPING, DOING CLERICAL WORK, or WORKING WITH NUMBERS AND SYMBOLS

- Activity

  Ask your parents or a teacher to explain to you how to keep a checkbook record. What skills are needed? What can happen if you don't keep a careful record?

F. MAINTAINING AND REPAIRING

- Discussion topic

  What would it be like if everyone had to fix his or her own belongings or buy new ones?

G. THINKING IN PICTURES

- Activities

  Collect cartoons by different cartoonists. What stands out most about each cartoonist's style?

  When you remember something that happened years ago, do you remember primarily words or pictures? Draw a picture of one of your memories.

H. USING ENVIRONMENTAL INFORMATION

- Discussion topics

  How have people's ideas about the environment changed in the last few years? Why have they changed?

  How do you feel about hunting laws?

  How would the world be changed if there were no plants?

I. WORKING WITH EQUIPMENT

- Discussion topics

  Do people need to be "good with their hands" to work with equipment?

  How is cooking for a family different from cooking in a restaurant?

More Information

Both teachers and counselors are likely to be asked for more information about particular occupations and Interest Areas. A few sources of relevant information for your own use or to suggest to your students are listed below. The list by no means exhausts the possibilities; rather, it is just a beginning.

Many guidance offices already have these references and more. Many libraries have extensive collections listed under "Careers." And don't overlook members of the community (including students' parents) in your search for sources of occupational information.

Department of Labor Publications

- Dictionary of Occupational Titles (U.S. Department of Labor, 3 volumes, 4th ed.). Vol. I: Definitions of Titles. Vol. II: Occupational Classifications.

- Occupational Outlook Handbook (U.S. Department of Labor, Bureau of Labor Statistics). Published biennially.

- Occupational Outlook Quarterly (U.S. Department of Labor, Bureau of Labor Statistics). Covers occupational developments between editions of the Handbook.

- Many other publications are available from the U.S. Department of Labor, Bureau of Labor Statistics. These include area wage surveys; municipal government wage surveys; union wage surveys; occupational wage surveys; The National Survey of Professional, Administrative, Technical, and Clerical Pay (annual); and NEWS, a periodic newsletter about labor and wage developments. To receive announcements of new publications, write to the U.S. Department of Labor, Office of Information, Washington, D.C. 20210, or to the department office that serves your region, as pictured and listed on the following page.

U. S. DEPARTMENT OF LABOR

REGIONAL OFFICES

Region I
1603 JFK Federal Building
Government Center
Boston, MA 02203
(617) 223-6762

Region II
Suite 3400
1515 Broadway
New York, NY 10036
(212) 971-5405

Region III
P. O. Box 13309
Philadelphia, PA 19101
(215) 597-1154

Region IV
Suite 540
1371 Peachtree St., NE
Atlanta, GA 30309
(404) 526-5418

Region V
230 S. Dearborn
Chicago, IL 60604
(312) 353-1880

Region VI
1100 Commerce St., Room 6B7
Dallas, TX 75202
(214) 749-3516

Regions VII and VIII
Federal Office Building
911 Walnut Street, 15th Floor
Kansas City, MO 64106
(816) 374-2481

Regions IX and X
450 Golden Gate Avenue
Box 36017
San Francisco, CA 94102
(415) 556-4678

Other Publications

- For a list of current titles (by all agencies of the U.S. Government) and their prices, write to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20202.

- Commercial reference books on careers--such as the Encyclopedia of Careers and Vocational Guidance (J.G. Ferguson Publishing Co., Chicago, two volumes, 1981)--are available in most public library reference rooms.

- Commercial indexes of occupational information--such as Counselors' Information Service (B'nai B'rith Vocational Service, Washington, D.C.), Career Guidance Index (Careers, Largo, Fla.), and Career Index (Chronicle Guidance Publications, Inc., Moravia, N.Y.)--are also available.

- Periodicals--such as Careers Quarterly (The Institute of Careers Officers) and Career World (Curriculum Innovations, Highwood, IL.)--may be helpful.

- Consult your reference librarian for bibliographies of occupational literature.

- The National Trade and Professional Associations of the United States (Columbia Books, Inc., Washington, D.C.) is an annual directory that provides names and addresses of national organizations, many of which have free or inexpensive information about their trades or professions.

- Many books, or series of books, on single occupations are available in the library. Typical titles include the following:

  Careers in . . .
  Jobs in . . .
  Your Job in (as) . . .
  Making a Living in (as) . . .
  Your Future in (as) . . .
  Opportunities in (as) . . .
  Your Career as a . . .
  . . . as a Career
  So You Want to Be a . . .
  New Careers in . . .
  What Does a . . . Do?
  I Know a . . .
  Career Opportunities in . . .
  I, the . . .

- State and local chambers of commerce often compile directories of relevant associations at the state and local levels.

- Many state employment services distribute career information materials free within their own states.

- State departments of education usually distribute some free or inexpensive materials through their guidance or vocational education components.

- The Bureau of Apprenticeship and Training (with offices situated in every state) disseminates career information about apprenticeable occupations.

- Labor unions (see "Labor Organizations" in Yellow Pages for locals), hospital associations, bar associations, other community organizations, training schools, universities, and the armed forces often have speakers' bureaus and/or free materials.